THE FOLLOWING IS THE ENGLISH TRANSLATION OF THE AMENDMENTS TO THE CLAIMS OF THE INTERNATIONAL APPLICATION UNDER PCT ARTICLE 19:

AMENDED SHEETS (Pages 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, and 47)

Pages 35-63 Replaced By Article 19 Amdt BC 2/11/05

CLAIMS

1 An image information encoding apparatus adapted for encoding an input image signal at least including intraframe encoding image, interframe forward predictive encoding image and interframe bi-directional predictive encoding image by orthogonal transform and motion prediction/compensation processing in which plural different pixel accuracies can be selected to generate image compressed information,

the image information encoding apparatus comprising:

motion prediction/compensation means for performing motion prediction/compensation processing based on different interpolation methods with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

2 The image information encoding apparatus as set forth in claim 1,

wherein the motion prediction/compensation means selects, as an interpolation method with respect to the interframe bi-directional predictive encoding image, a method in which operation quantity and the number of memory accesses are reduced to more degree as compared to the interframe forward predictive encoding image.

3 The image information encoding apparatus as set forth in claim 1,

which comprises picture type discrimination means for discriminating picture type of the input image signal,

wherein the picture type discrimination means transmits, to the motion prediction/compensation means, command corresponding to the interframe forward predictive encoding image or the interframe bi-directional predictive encoding image in accordance with discrimination result of the picture type to control the command.

4 The image information encoding apparatus as set forth in claim 3,

wherein the motion prediction/compensation means performs motion prediction/compensation processing by using a predetermined fixed filter with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

5 The image encoding apparatus as set forth in claim 4,

wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

6 The image information encoding apparatus as set forth in claim 5,

wherein the motion prediction/compensation means serves to perform motion prediction/compensation of 1/8 pixel accuracy, and performs motion prediction/compensation processing by using filter coefficients of 8 taps expressed below with respect to the interframe forward predictive encoding image:

1 : 1

1/8 : {−3, 12, −37, 485, 71, −21, 6, −1}/512

2/8 : {−3, 12, −37, 229, 71, −21, 6, −1}/256

3/8 : {−6, 24, −76, 387, 229, −60, 18, −4}/512

4/8 : {−3, 12, −39, 158, 158, −39, 12, −3}/256

5/8 : {−4, 18, −60, 229, 387, −76, 24, −6}/512

6/8 : {−1, 6, −21, 71, 229, −37, 12, −3}/256

7/8 : {−1, 6, −21, 71, 485, −37, 12, −3}/512

7 The image information encoding apparatus as set forth in claim 6, wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/8 pixel accuracy by linear interpolation with respect to the interframe bi-directional predictive encoding picture.

8 The image information encoding apparatus as set forth in claim 5, wherein the motion prediction/compensation means serves to perform motion prediction/compensation of 1/4 pixel accuracy, and performs motion prediction/compensation processing by using filters of 8 taps expressed below with respect to the interframe forward predictive encoding image:

1 : 1

1/4 : {−3, 12, −37, 229, 71, −21, 6, −1}/256

2/4 : {−3, 12, −39, 158, 158, −39, 12, −3}/256

3/4 : {−1, 6, −21, 71, 229, −37, 12, −3}/256

9 The image information encoding apparatus as set forth in claim 8, wherein the motion prediction/compensation means performs motion

prediction/compensation processing of 1/2 pixel accuracy by using filter coefficients of 6 taps expressed below:

{1, −5, 20, 20, −5, 1}/32

with respect to the interframe bi-directional predictive encoding image to perform motion prediction/compensation processing of 1/4 pixel accuracy by linear interpolation on the basis of generated pixels.

10 The image information encoding apparatus as set forth in claim 8,

wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/4 pixel accuracy by linear interpolation with respect to the interframe bi-directional predictive encoding image.

11 The image information encoding apparatus as set forth in claim 5,

wherein the motion prediction/compensation means serves to perform motion prediction/compensation of 1/4 pixel accuracy, and

performs motion prediction/compensation processing of 1/2 pixel accuracy by using filter coefficients of 6 taps expressed below with respec to the interframe forward predictive encoding image

{1, −5, 20, 20, −5, 1}/32

to perform motion prediction/compensation processing of 1/4 pixel accuracy by linear interpolation on the basis of generated pixels.

12 The image information encoding apparatus as set forth in claim 11,

wherein the motion prediction/compensation means performs motion

prediction/compensation processing of 1/4 pixel accuracy by linear interpolation with respect to the interframe bi-directional predictive encoding image.

13 The image information encoding apparatus as set forth in claim 4,

wherein the motion prediction/compensation means allows pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

14 The image information encoding apparatus as set forth in claim 13,

wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/8 pixel accuracy with respect to the interframe forward predictive encoding image, and performs motion prediction/compensation processing of 1/4 pixel accuracy with respect to the interframe bi-directional predictive encoding image.

15 The image information encoding apparatus as set forth in claim 14,

wherein the motion prediction/compensation means performs motion prediction/compensation processing by using filter coefficients of 8 taps expressed below with respect to the interframe forward predictive encoding image:

1 : 1

1/8 : {−3, 12, −37, 485, 71, −21, 6, −1}/512

2/8 : {−3, 12, −37, 229, 71, −21, 6, −1}/256

3/8 : {−6, 24, −76, 387, 229, −60, 18, −4}/512

4/8 : {−3, 12, −39, 158, 158, −39, 12, −3}/256

5/8 : {−4, 18, −60, 229, 387, −76, 24, −6}/512

6/8 : {−1, 6, −21, 71, 229, −37, 12, −3}/256

7/8 : {−1, 6, −21, 71, 485, −37, 12, −3}/512

16 The image information encoding apparatus as set forth in claim 14, wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/2 pixel accuracy by using filter coefficients of 6 taps expressed below with respect to the interframe bi-directional predictive encoding image:

{1, −5, 20, 20, −5, 1}/32

to perform motion prediction/compensation processing of 1/4 pixel accuracy by linear interpolation on the basis of generated pixels.

17 The image information encoding apparatus as set forth in claim 14, wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/4 pixel accuracy by linear interpolation with respect to the interframe bi-directional processing encoding image.

18 The image information encoding apparatus as set forth in claim 13, wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/8 pixel accuracy with respect to the interframe forward predictive encoding image, and performs motion

prediction/compensation processing of 1/2 pixel accuracy with respect to the interframe bi-directional predictive encoding image.

19 The image information encoding apparatus as set forth in claim 18, wherein the motion prediction/compensation means performs motion prediction/compensation processing by using filter coefficients of 8 taps expressed below with respect to the interframe forward predictive encoding image:

1 : 1

1/8 : {−3, 12, −37, 485, 71, −21, 6, −1}/512

2/8 : {−3, 12, −37, 229, 71, −21, 6, −1}/256

3/8 : {−6, 24, −76, 387, 229, −60, 18, −4}/512

4/8 : {−3, 12, −39, 158, 158, −39, 12, −3}/256

5/8 : {−4, 18, −60, 229, 387, −76, 24, −6}/512

6/8 : {−1, 6, −21, 71, 229, −37, 12, −3}/256

7/8 : {−1, 6, −21, 71, 485, −37, 12, −3}/512

20 The image information encoding apparatus as set forth in claim 18, wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/2 pixel accuracy by linear interpolation with respect to the interframe bi-directional predictive encoding image.

21 The image encoding apparatus as set forth in claim 13, wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/4 pixel accuracy with respect to the

interframe forward predictive encoding image, and performs motion prediction/compensation processing of 1/2 pixel accuracy with respect to the interframe bi-directional predictive encoding image.

22 The image information encoding apparatus as set forth in claim 21,

wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/2 pixel accuracy by using filter coefficients of 6 taps expressed as with respect to the interframe bi-directional predictive encoding image

{1, −5, 20, 20, −5, 1}/32

to perform motion prediction/compensation processing of 1/4 pixel accuracy by linear interpolation on the basis of generated pixels.

23 The image information encoding apparatus as set forth in claim 21,

wherein the motion prediction/compensation means performs motion prediction/compensation processing of 1/2 pixel accuracy by lonear interpolation with respect to the interframe bi-directional predictive encoding image.

24 The image information encoding apparatus as set forth in claim 12,

wherein information relating to pixel accuracy of motion prediction/compensation processing are respectively embedded in MotionResolution field at RTP layer within the image compressed information with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

25 The image information encoding apparatus as set forth in claim 3,

wherein the motion prediction/compensation means performs motion prediction/compensation processing by using a predetermined fixed filter with respect to the interframe bi-directional predictive encoding image, and performs motion prediction/compensation processing by using an adaptive filter corresponding to an input image with respect to the interframe forward predictive encoding image.

26 The image information encoding apparatus as set forth in claim 25,

wherein the motion prediction/compensation means first determines a motion vector to minimize predictive error by using a predetermined filter with respect to the interframe forward predictive encoding image to determine such filter coefficients to minimize predictive error with respect to the determined motion vector to perform motion prediction/compensation processing by using the motion vector and the filter coefficients.

27 The image information encoding apparatus as set forth in claim 26,

wherein information relating to the filter coefficients with respect to the interframe forward predictive encoding image is embedded in the image compressed information.

28 The image information encoding apparatus as set forth in claim 27,

wherein information relating to the filter coefficients is embedded in the image compressed information after undergone reversible encoding.

29 The image information encoding apparatus as set forth in claim 25, wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

30 The image information encoding apparatus as set forth in claim 25, wherein the motion prediction/compensation means allows pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

31 The image information encoding apparatus as set forth in claim 30, wherein information relating to pixel accuracy of motion prediction/compensation processing are respectively embedded in MotionResolution field at RTP layer within the image compressed information with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

32 An image information encoding method of encoding an input image signal at least including intraframe encoding image, interframe forward predictive encoding image and interframe bi-directional predictive encoding image by orthogonal transform and motion prediction/compensation processing in which plural different pixel accuracies can be selected to generate image compressed

information,

the image information encoding method including a motion prediction/compensation step of performing motion prediction/compensation processing based on different interpolation methods with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

33 The image information encoding method as set forth in claim 32,

wherein, at the motion prediction/compensation step, as an interpolation method with respect to the interframe bi-directional predictive encoding image, there is selected a method in which operation quantity and the number of memory accesses are reduced to more degree as compared to the interframe forward predictive encoding image.

34 The image information encoding method as set forth in claim 32,

which includes a picture type discrimination step of discriminating picture type of the input image signal,

wherein, at the picture type discrimination step, transmission of command corresponding to the interframe forward predictive encoding image or the interframe bi-directional predictive encoding image is performed in accordance with discrimination result of the picture type so that processing at the motion prediction/compensation step is controlled.

35 The image information encoding method as set forth in claim 34,

wherein, at the motion prediction/compensation step, motion prediction/compensation processing is performed by using a predetermined fixed filter with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

36 The image information encoding method as set forth in claim 35,

wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive encoding image are used with respect to the interframe bi-directional predictive encoding image.

37 The image information encoding method as set forth in claim 35,

wherein, at the motion prediction/compensation step, pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image is caused to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

38 The image information encoding method as set forth in claim 34,

wherein, at the motion prediction/compensation step, motion prediction/compensation processing is performed by using a predetermined fixed filter with respect to the interframe bi-directional predictive encoding image, and

motion prediction/compensation processing is performed by using an adaptive filter corresponding to input image with respect to the interframe forward predictive encoding image.

39 The image information encoding method as set forth in claim 38,

wherein, at the motion prediction/compensation step, motion vector to minimize predictive error is first determined by using a predetermined filter with respect to the interframe forward predictive encoding image, and such filter coefficients to minimize predictive error are determined with respect to the determined motion vector so that motion prediction/compensation processing are performed by using the motion vector and the filter coefficients.

40 The image information encoding method as set forth in claim 38,

wherein pixel accuracies of the motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive encoding image are used with respect to the interframe bi-directional predictive encoding image

41 The image information encoding method as set forth in claim 38,

wherein, at the motion prediction/compensation step, pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image is caused to be higher than pixel accuracy of motion

prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

42 A program for allowing computer to execute processing which encodes an input image signal at least including intraframe encoding image, interframe forward predictive encoding image and interframe bi-directional predictive predictive encoding image by orthogonal transform and motion prediction/compensation processing in which plural different pixel accuracies can be selected to generate image compressed information,

the program including a motion prediction/compensation step of performing motion prediction/compensation processing based on different interpolation methods with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

43 The program as set forth in claim 42,

wherein, at the motion prediction/compensation step, as an interpolation method with respect to the interframe bi-directional predictive encoding image, there is selected a method in which operation quantity and the number of memory accesses are reduced to more degree as compared to the interframe forward predictive encoding image.

44 The program as set forth in claim 42,

which includes a picture type discrimination step of discriminating picture type of the input image signal,

wherein, at the picture type discrimination step, transmission of command corresponding to the interframe forward predictive encoding image or the interframe bi-directional predictive encoding image is performed in accordance with discrimination result of the picture type so that processing at the motion prediction/compensation step is controlled.

45 The program as set forth in claim 44,

wherein motion prediction/compensation processing is performed by using a predetermined fixed filter with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

46 The program as set forth in claim 45,

wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive encoding image are used with respect to the interframe bi-directional predictive encoding image.

47 The program as set forth in claim 45,

wherein, at the motion prediction/compensation step, pixel accuracy of motion prediction/compensation processing with respec to the interframe forward predictive encoding image is caused to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional

predictive encoding image.

48 The program as set forth in claim 44,

wherein, at the motion prediction/compensation step, motion prediction/compensation processing is performed by using a predetermined fixed filter with respect to the interframe bi-directional predictive encoding image, and motion prediction/compensation processing is performed by using an adaptive filter corresponding to an input image is performed with respect to the interframe forward predictive encoding image.

49 The program as set forth in claim 48,

wherein, at the motion prediction/compensation step, motion vector to minimize predictive error is first determined by using a predetermined filter with respect to the interframe forward predictive encoding image, and such filter coefficients to minimize predictive error are determined with respect to the determined motion vector so that motion prediction/compensation processing is performed by using the motion vector and the filter coefficients.

50 The program as set forth in claim 48,

wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive encoding image are used with respect to the interframe bi-directional predictive

encoding image.

51 The program as set forth in claim 48,

wherein, at the motion prediction/compensation step, pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image is caused to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

52 An image information decoding apparatus adapted for decoding image compressed information at least including intraframe encoding image, interframe forward predictive encoding image and interframe bi-directional predictive encoding image which have been generated at an image information encoding apparatus by inverse-orthogonal transform and motion prediction/compensation processing in which plural different pixel accuracies can be selected,

the image information decoding apparatus comprising:

motion prediction/compensation means for perfoming motion prediction/compensation processing based on different interpolation methods with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

53 The image information decoding apparatus as set forth in claim 52,

wherein the motion prediction/compensation means selects, as an interpolation method with respect to the interframe bi-directional predictive

encoding image, a method in which operation quantity and the number of memory accesses are reduced to more degree as compared to the interframe forward predictive encoding image.

54 The image information decoding apparatus as set forth in claim 52,

which comprises picture type discrimination means for discriminating picture type of the image compressed information,

wherein the picture type discrimination means transmits, to the motion prediction/compensation means, command corresponding to the interframe forward predective encoding image or the interframe bi-directional predictive encoding image in accordance with discrimination result of the picture type to control the command.

55 The image information decoding apparatus as set forth in claim 54

wherein the motion prediction/compensation means performs motion prediction/compensation processing by using a predetermined fixed filter with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

56 The image information decoding apparatus as set forth in claim 55,

wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive

encoding image are used with respect to the interframe bi-directional predictive encoding image.

57 The image information decoding apparatus as set forth in claim 55,

wherein the motion prediction/compensation means allows pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

58 The image information decoding apparatus as set forth in claim 57,

wherein information relating to pixel accuracy of motion prediction/compensation processing are respectively embedded in MotionResolution field at RTP layer within the image compressed information with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and

wherein the motion prediction/compensation means performs motion prediction/compensation processing on the basis of information relating to the pixel accuracy.

59 The image information decoding apparatus as set forth in claim 54,

wherein the motion prediction/compensation means performs motion prediction/compensation processing by using a predetermined fixed filter with respect to the interframe bi-directional predictive encoding image, and performs

motion prediction/compensation processing by using an adaptive filter corresponding to an input image with respect to the interframe forward predictive encoding image.

60 The image information decoding apparatus as set forth in claim 59,

wherein the motion prediction/compensation means first determines a motion vector to minimize predictive error by using a predetermined filter with respect to the interframe forward predictive encoding image to determine such filter coefficients to minimize predictive error with respect to the determined motion vector to perform motion prediction/compensation processing by using the motion vector and the filter coefficients.

61 The image information decoding apparatus as set forth in claim 60,

wherein information relating to the filter coefficients with respect to the interframe forward predictive encoding image is embedded in the image compressed information, and

wherein the picture type discrimination means is operative so that in the case where corresponding frame is the interframe forward predictive encoding image, it takes out at least information relating to the filter coefficients from the image compressed information to transmit the information to the motion prediction/compression means.

62 The image information decoding apparatus as set forth in claim 59,

wherein pixel accuracies of motion prediction/compensation processing are

equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive encoding image are used with respect to the interframe bi-directional predictive encoding image.

63 The image information decoding apparatus as set forth in claim 59,

wherein the motion prediction/compensation means allows pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

64 The image information decoding apparatus as set forth in claim 63,

wherein information relating to pixel accuracy of motion prediction/compensation processing are respectively embedded in MotionResolution field at RTP layer within the image compressed information with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and

wherein the motion prediction/compensation means performs motion prediction/compensation processing on the basis of information relating to the pixel accuracy.

65 An image information decoding method of decoding image compressed

information at least including intraframe encoding image, interframe forward predictive encoding image and interframe bi-directional predictive encoding image by inverse-orthogonal transform and motion prediction/compression processing in which plural different pixel accuracies can be selected,

the image information decoding method including:

a motion prediction/compensation step of performing motion prediction/compensation processing based on different interpolation methods with respect to the interframe forward predictive encoding image and interframe bi-directional predictive encoding image.

66 The image information decoding method as set forth in claim 65,

wherein, at the motion prediction/compensation step, as an interpolation method with respect to the interframe bi-directional predictive encoding image, there is selected a method in which operation quantity and the number of memory accesses are reduced to more degree as compared to the interframe forward predictive encoding image.

67 The image information decoding method as set forth in claim 65,

which includes a picture type discrimination step of discriminating picture type of the image compressed information,

wherein, at the picture type discrimination step, transmission of command corresponding to the interframe forward predictive encoding image or the interframe bi-directional predictive encoding image is performed in accordance

with discrimination result of the picture type so that processing at the motion prediction/compensation step is controlled.

68 The image information decoding method as set forth in claim 67,

wherein, at the motion prediction/compensation step, motion prediction/compensation processing is performed by using a predtermined fixed filter with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

69 The image information decoding method as set forth in claim 68,

wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive encoding image are used with respect to the interframe bi-directional predictive encoding image.

70 The image information decoding method as set forth in claim 68,

wherein, at the motion prediction/compensation step, pixel accuracy of motion prediction/compensation with respect to the interframe forward predictive encoding image is caused to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

71 The image information decoding method as set forth in claim 67,

wherein, at the motion prediction/compensation step, motion prediction/compensation processing is performed by using a predtermined fixed filter with respect to the interframe bi-directional predictive encoding image, and motion prediction/compensation processing is performed by using an adaptive filter corresponding to an input image with respect to the interframe forward predictive encoding image.

72 The image information decoding method as set forth in claim 71,

wherein, at the motion prediction/compensation step, a motion vector to minimize predictive error is first determined by using a predetermined filter with respect to the interframe forward predictive encoding image, and such filter coefficients to minimize predictive error are determined with respect to the determined motion vector so that motion prediction/compensation processing is performed by using the motion vector and the filter coefficients.

73 The image information decoding method as set forth in claim 72,

wherein information relating to the filter coefficients with respect to the interframe forward predictive encoding image is embedded in the image compressed information, and

wherein, at the picture type discrimination step, in the case where corresponding frame is the interframe forward predictive encoding image, at least information relating to the filter coefficients is taken out from the image compressed information so that transmission of that information is performed, and

the information thus obtained is used at the motion prediction/compensation step.

74 The image information decoding method as set forth in claim 71,

wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive encoding image are used with respect to the interframe bi-directional predictive encoding image.

75 The image information decoding method as set forth in claim 71,

wherein, at the motion prediction/compensation step, pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image is caused to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

76 A program adapted for allowing computer to execute processing which decodes image compressed information at least including intraframe encoding image, interframe forward predictive encoding image and interframe bi-directional predictive encoding image which have been generated at an image information encoding apparatus by inverse-orthogonal transform and motion prediction/compensation processing in which plural different pixel accuracies can be selected,

the program including:

a motion prediction/compensation step of performing motion prediction/compensation processing based on different interpolation methods with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

77 The program as set forth in claim 76,

wherein, at the motion prediction/compensation step, as an interpolation method with respect to the interframe bi-directional predictive encoding image, there is selected a method in which operation quantity and the number of memory accesses are reduced to more degree as compared to the interframe forward predictive encoding image.

78 The program as set forth in claim 76,

which includes a picture type discrimination step of discriminating picture type of the image compressed information,

wherein, at the picture type discrimination step, transmission of command corresponding to the interframe forward predictive encoding image or the interframe bi-directional predictive encoding image is performed in accordance with discrimination result of the picture type so that processing at the motion prediction/compensation step is controlled.

79 The program as set forth in claim 78,

wherein, at the motion prediction/compensation processing step, motion

prediction/compensation processing is performed by using a predetermined fixed filter with respect to the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image.

80 The program as set forth in claim 79,

wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive encoding image are used with respect to the interframe bi-directional predictive encoding image.

81 The program as set forth in claim 79,

wherein, at the motion prediction/compensation step, pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image is caused to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.

82 The program as set forth in claim 78,

wherein, at the motion prediction/compensation step, motion prediction/compensation processing is performed by using a predtermined fixed filter with respect to the interframe bi-directional predictive encoding image, and motion prediction/compensation processing is performed by using an adaptive filter

corresponding to an input image with respect to the interframe forward predictive encoding image.

83 The program as set forth in claim 82,

wherein, at the motion prediction/compensation step, a motion vector to minimize predictive error is first determined by using a predetermined filter with respect to the interframe forward predictive encoding image, and such filter coefficients to minimize predictive error are determined with respect to the determined motion vector so that motion prediction/compensation processing is performed by using the motion vector and the filter coefficients.

84 The program as set forth in claim 83,

wherein information relating to the filter coefficients with respect to the interframe forward predictive encoding image is embedded in the image compressed information, and

wherein, at the picture type discrimination step, in the case where corresponding frame is the interframe forward predictive encoding image, at least information relating to the filter coefficients is taken out from the image compressed information and transmission of the information is performed, and the information is used at the motion prediction/compensation step.

85 The program as set forth in claim 82,

wherein pixel accuracies of motion prediction/compensation processing are equal to each other at the interframe forward predictive encoding

image and the interframe bi-directional predictive encoding image, and filter coefficients having the number of taps lesser than that with respect to the interframe forward predictive encoding image are used with respect to the interframe bi-directional predictive encoding image.

86 The program as set forth in claim 82,

wherein, at the motion prediction/compensation step, pixel accuracy of motion prediction/compensation processing with respect to the interframe forward predictive encoding image is caused to be higher than pixel accuracy of motion prediction/compensation processing with respect to the interframe bi-directional predictive encoding image.